CLAIMS

1. Separating cyclone for at least partially separating a mixture of fluids of different density into a light fraction with a relatively low density and a heavy fraction with a relatively high density, comprising:

- an outer casing which defines a flow space through which the mixture is to flow;
- inlet means connected distally to the outer casing for admitting the mixture for separating into the flow space,
- a flow body disposed in the flow space wherein the mixture can be guided between the flow body and outer casing and wherein the distal part of the flow body has a decreasing diameter;
- rotating means for setting into rotation the mixture for separating;
- first outlet means connected proximally to the outer casing for discharging the heavy fraction from the flow space;
- second outlet means disposed in the flow space for discharging the light fraction from the flow space,

characterized in that

one or more bypass channels are provided in said distal part of the flow body, via which channels a part of the mixture flowing along the flow body can be guided.

2. Separating cyclone as claimed in claim 1, wherein a bypass channel extends from a position (x1), at which the flow body has a relatively large diameter, to a position (x2) at which the flow body has a relatively small diameter.

3. Separating cyclone as claimed in claim 1 or 2, wherein a bypass channel is practically annular in cross-section through the flow body.

4. Separating cyclone as claimed in any of the foregoing claims, wherein a bypass channel is embodied coaxially with the flow body.

5. Separating cyclone as claimed in any of the foregoing claims, wherein the distal part of the flow body has a conical form.

6. Separating cyclone as claimed in any of the foregoing claims, wherein the inlet means comprise an inlet part extending axially relative to the outer casing and debouching in the flow space.

7. Separating cyclone as claimed in any of the foregoing claims, wherein the inlet means comprise an inlet part extending tangentially relative to the flow space and debouching in the flow space.

8. Separating cyclone as claimed in any of the foregoing claims, wherein the rotating means are positioned between the flow body and the outer casing for setting into rotation the mixture flowing therealong.

9. Separating cyclone as claimed in claim 8, wherein the rotating means comprise one or more swirl blades.

10. Separating cyclone as claimed in claim 9, wherein the rotating means are fixed to the flow body and/or the outer casing.

11. Separating cyclone as claimed in any of the foregoing claims, wherein the rotating means are formed by the inner side of the outer casing.

12. Separating cyclone as claimed in claim 11, wherein the outer casing takes the form of an axially extending surface of revolution.

13. Separating cyclone as claimed in claim 11 or 12, wherein the inner side of the outer casing has a substantially cylindrical form.

14. Separating cyclone as claimed in any of the foregoing claims, wherein the outer casing has a

decreasing diameter at the position of the distal part of the flow body.

15. Separating cyclone as claimed in claim 14, wherein the diameter of the outer casing is adapted to the diameter of the flow body such that an almost constant flow surface is provided.

16. Separating cyclone as claimed in any of the foregoing claims, wherein the first outlet means comprise a discharge pipe extending coaxially with the flow space.

17. Separating cyclone as claimed in any of the foregoing claims, wherein the second outlet means comprise a discharge channel extending through the flow body, the inlet opening of which channel is positioned at the distal end of the flow body.

18. Flow body for a separating cyclone for at least partially separating a mixture of fluids of different density into a light fraction with a relatively low density and a heavy fraction with a relatively high density, wherein the flow body comprises a proximal part on which rotating means are arranged for setting into rotation the mixture flowing therealong, and also comprises a distal part of decreasing diameter, in which distal part one or more bypass channels are provided, via which a part of the fluid flowing along the flow body can be guided.

19. Flow body as claimed in claim 18, wherein a bypass channel extends from a position (x1), at which the flow body has a relatively large diameter, to a position (x2) at which the flow body has a relatively small diameter.

20. Flow body as claimed in claim 18 or 19, comprising a bypass channel of substantially annular cross-section.

21. Flow body as claimed in any of the foregoing claims 18-20, wherein a bypass channel is embodied co-co-axially with the flow body.

22. Flow body as claimed in any of the foregoing claims, wherein the distal part of the flow body has a conical form.

23. Flow body as defined in any of the claims 1-17.

24. Method for at least partially separating a mixture of fluids of different density into a light fraction with a relatively low density and a heavy fraction with a relatively high density, comprising of:

- feeding the mixture for separating into a flow space defined by an outer casing;
- setting the admitted mixture into rotation;
- guiding the mixture, once set into rotation, along a flow body disposed in the flow space;
- discharging the heavy fraction via a first outlet means connected proximally to the outer casing;
- discharging the light fraction from the flow space via second outlet means disposed in the flow space,

characterized by

guiding a part of the mixture flowing along the flow body through one or more bypass channels arranged in the flow body.

25. Method as claimed in claim 24, comprising of axially supplying the mixture for separating and, using swirl blades arranged between the outer casing and the flow body, setting into rotation the mixture flowing therealong.

26. Method as claimed in claim 24, comprising of tangentially supplying the mixture for separating and, using the outer casing, setting into rotation the mixture flowing therealong.

27. Method for at least partially separating a mixture of fluids of different density into a light fraction with a relatively low density and a heavy fraction with a relatively high density, wherein a

separating cyclone and/or a flow body as claimed in any of the foregoing claims 1-23 is applied.

28. Separating cyclone, flow body and/or method as claimed in at least one of the foregoing claims, wherein the heavy fraction substantially comprises water and the light fraction substantially comprises oil.